

KRAL, V.

PHASE I BOOK EXPLOITATION

z/6284

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. CAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končický.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components,

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Basic Problems in the Construction (Cont.)

burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

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589

O. Schürek (Aviation Research and Testing Institute, Letňany). Burning of Fuel in Combustion Chambers of Jet Engines

603

AVAILABLE: Library of Congress

SUBJECT: Aerospace

AD/jsj/jk
3/21/63

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KRAL, V.

"Lakes on the Northern Slope of the Liptov Tatra Mountains", P. 1,
(KARTOGRAFICKY PREHLED, Vol. 7(1. e. 8), No. 1, Mar. 1954, Praha,
Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

ERAL, V.

"The Research Institute of Forest Economy Helps to Educate Cadres of Experts", P. 37, (LSC, Vol. 1, No. 1, January 1954, Bratislava, (zech.)

SC: Monthly List of East European Accessions (ERAL), 10, Vol. 4, No. 3, March 1955, Uncl.

CZECHOSLOVAKIA/Plant Diseases - Diseases of Forest Species.

0-2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30192

Author : Kral, Viktor

Inst :

Title : Treating Forest Tree Seeds Against Fungi.

Orig Pub : Les, 1956, No 6, 250-252.

Abstract : Tests to treat spruce and pine seeds in order to ward off Fusarium, Botrytis cinerea, Alternaria tenuis, etc. are described which were made in Czechoslovakia. The preparation "agronal" was used. The techniques are described.

Card 1/1

KRAL, Viktor, inz.

The activities of Forest Seed Research Station in Liptovsky Hradok. Vostnik CSAZV 9 no.3:163-165 '62.

1. Vyskumna stanica lesneho semenarstva, Pobočka
Československé akademie polnohospodarských vied,
Liptovský Hradok.

KRAL, Viktor, inz.

Results of the analyses of stored disinfected seed of Norway spruce (*Picea excelsa* Link). Les 9 no. 7:635-648 J1'63.

1. Vyskumny ustav lesneho hospodarstva, Banska Stiavnica, Semenarska stanica Liptovsky Hradok.

KRAL, V.; BLUMILOVA, J.; SULA, J.

Separation of aromatic hydrocarbons by column chromatography on acetyl cellulose with regard to the detection and determination of 3,4-benzopyrene. Chem listy 58 no.12:1442-1451 D '64.

1. No.2. Institute of Medical Chemistry of the Faculty of General Medicine of Charles University, Prague.

KRAL V. Ze sanatoria pro nemoci nervove a dusevni v Praze, Veleslavine.
O lecení migreny dihydroergotaminem-Sandoz Treatment of migraine with dihydro-
ergotamine*Sandoz Praktický lékař, Prague 1948, 21 (469-472)

The action of dihydroergotamine (DHE) on the migrainous attack is discussed.
According to the clinical experiences, the drug acts not only in the second (vaso-
dilatory) phase but also in the first (vasoconstrictory) phase. It therefore
seems safe to assume that the beneficial effect of DHE is not due to vaso-
constriction which could not be proved clinically with intramuscular, sub-
cutaneous or oral application but rather to its sympathicolytic action,
exerted centrally on the vegetative regulation of the cerebral vessels.
Kral-Montreal

So: Neurology & Psychiatry Section VIII Vol.4, No. 1-6

KRAL, VLADIMIR, MUDr

KRAL, Vladimír, MUDr

Lumbar anesthesia in cesarean section. Cesk. gyn. 19 no.4:269-274
July 54.

1. Por. gyn. odd. KUNZ v Gottwaldovic.
(ANESTHESIA, SPINAL
lumbar, in cesarean section)
(CESAREAN SECTION, anesthesia and analgesia
lumbar anesth.)

KRAL, Vladimir, Ing. arch.

Types of medical establishments. Cesk. nemoc. 22 no.3-4:56-65 My '54.

1. TU, Stavoprojekt, Praha.
(HOSPITALS,
*floor plans)

MESTAN, J. F., MUDr.; KRAL, V., MUDr.; HORNI, J., MUDr.

~~Abstract of the paper~~
Meteorological effects on myocardial infarct. Cas lek. cesk.
95 no.22:581-585 1 June 56.

1. Z interniho oddeleni KUNZ Karlovy Vary (prim. MUDr.
J. Havranek).

(MYOCARDIAL INFARCT, physiology,

metereol. aspects (Cz))

(CLIMATE,

metereol. aspects of myocardial infarct (Cz))

KRAL, Vladimir, Primar MUDr.

Detection of female cancer in Gottwaldov Region. Cesk. gyn.
22/36 no.1-2:116-119 Feb 57.

1. KUNZ Gottwaldov.

(NEOPLASMS, diag.

mass detection of female cancer in Czechoslovakia (Cz))

(GYNECOLOGICAL DISEASES, diag.

mass detection in Czechoslovakia (Cz))

HAVRANEK, J.; KRAL, V.

Coronary diseases of the heart and diseases of the gallbladder and bile. Cas.lek.cesk 100 no.2:47-55 13 Ja '61.

1. Vnitřní oddělení krajské nemocnice v Karlových Varech, přednosta prim. MUDr. Josef Havranek.

(CORONARY DISEASE compl) (BILIARY TRACT dis)

ACC NR: AP6020028

SOURCE CODE: CZ/C079/65/007/003/0320/0321

AUTHOR: Kral, V.

ORG: Institute of Labor Hygiene and Occupational Diseases, Prague (Ustav hygieny prace a chorob z povolani)

TITLE: Photoelectrical recording of motor activity

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 320-321

TOPIC TAGS: rat, behavior pattern, man, germanium diode, photoelectric effect, medical laboratory instrument

ABSTRACT: The recording of motor activity of experimental animals can be carried out successfully by the use of photoelectrical recorders. Chain motor reactions in rats were recorded by this method. It is possible to use the device even for experiments on humans. The author describes a new design of a recorder incorporating semiconductor elements, germanium resistance photodiode with a maximum sensitivity in the infrared region. Details of the construction of the apparatus are given. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06, 09, 20 / SUBM DATE: none

Card 1/1 JS

L 29485-66

ACC NR: AP6020029

SOURCE CODE: CZ/0079/65/007/003/0321/0324

AUTHOR: Kral, V. (Prague)

ORG: Institute of Labor Hygiene and Occupational Diseases, Prague (Ustav hygieny prace a chorob z povolani)

TITLE: Universal electronic stop watch with automatic recording

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 321-324

TOPIC TAGS: pulse counter, pulse generator, transistorized circuit, integrated electronic device

ABSTRACT: The counter method of time measurements is discussed; it is based on counting the number of pulses produced at a definite frequency. The author designed and constructed an apparatus consisting of a source of pulses generated at a frequency of 1000 cycles, a pulse counter, transmitter and a recorder. The pulse generator is transistorized, producing square impulses. The pulse counter is of East German origin. The transmitter has three functions: it reads the counter at the end of the measured period, transforms this information into a 5-digit code, and actuates the recording of the value measured. It is of Czech manufacture. Orig. art. has: 1 figure and 1 formula. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 001
SOV REF: 001
Card 1/1 JS

KRAL, Y.e.M.

KRAL, (fnu) (Capt. MD)

Coauthor, with Lt. Col. ONDRACEK (fnu), MD, and Capt. PALISA (fnu), MD, of article, "Epidemic of Czechoslovak Tick Encephalitis in Hradec Kralove Kraj in 1953," comparing clinical aspects of louping ill, Czechoslovak encephalitis, and Russian spring-summer encephalitis.
(VZL, Feb 55)

SO: Sum. 600, 1 Aug. 1955,

KRAL', Ye.M.

Result of studying the effectiveness of the dry living vaccine developed by the Institute of Epidemiology and Microbiology of the Academy of Medical Sciences of the U.S.S.R. for the prevention of brucellosis. Zhur.mikrobiol.epid. i immun. no.7:38-40 J1 '55. (MLRA 8:9)

1. Iz Krasnodarskoy krayevoy protivobrutselleznoy stantsii (glavnyy vrach Ye.V.Strikhanova, nauchnyy rukovoditel' prof. B.P. Pervushin)

(BRUCELLOSIS, prevention and control,
vacc. in Russia, dry living vaccine

(VACCINES AND VACCINATION,
brucellosis dry living vaccine, effectiveness in
Russia)

1955, 4.

"Regulation of the flow of liquid chlorine in cellulose plants."

Průmysl a zemědělství. Praha, Czechoslovakia. Vol. 12, no. 1, May. 1955.

Monthly List of East European newspapers (1955, 1956, 1957, No. 6, Jun 57, Unclass

KRAL, Zdenek, inz., zastupujici docent

Laboratory preparation of handmade paper. Papir a celuloza
19 no.5:142-143 My '64.

1. Chair of Wood Chemical Technology, Higher School of
Chemical Technology, Pardubice.

CHLADEK, Vl.; KRAL, Z.

Operations on the laryngeal cartilages after irradiation. Cesk.
otolaryng. 13 no.1:34-40 F'64.

1. Otolaryngologická klinika lékařské fakulty hygienické KU v
Praze (prednosta: prof. dr. Vl. Hlavacek, DrSc.) a Patologicko-
anatomický ústav fakultní nemocnice v Praze 10 (prednosta: ~~doc.~~
dr. J. Stolz)

*

NAHODIL, V.; HRDINA, R.; KRÁL, Z.

Submucous lipoma of the duodenal bulb. Rozh. chir. 43 no.1:
44-46 Ja'64.

1. Chirurgická klinika lékařské fakulty Hygienické KU v
Praze (prednosta: prof. dr. E. Polák, DrSc.) ; Rentgenolo-
gické oddělení OUK v Praze 10 (vedoucí: MUDr. V. Vinduska)
a Ústav pro patologickou anatomii lékařské fakulty Hygienické
KU v Praze (prednosta: doc. dr. J. Stolz).

*

L 13214-66 EWA(j)/T/EWA(b)-2 JK

ACC NR: AP6006102

SOURCE CODE: CZ/0053/65/014/004/0320/0321

AUTHOR: Waitzova, D.; Kyncl, F.; Kral, Z.; Smejkal, F. 33

ORG: Research Institute for Antibiotics, Roztoky (Vyzkumny ustav antibiotik) B

TITLE: Effect of changes in the acid-base balance on nephrotoxicity of neomycin
[This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 28 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 320-321

TOPIC TAGS: acid base equilibrium, rat, antibiotic, neomycin, pathology, toxicology, urology

ABSTRACT: Acidosis brought on by administration of ammonium chloride reduced urinary concentration of neomycin in rats to 367 units per ml, whereas in control rats and those given nothing but sodium carbonate (NaHCO_3), the concentration was 834 to 837 units per ml. Neither acidification or alkalization prevented the nephrotoxic histopathologic effect of this antibiotic. [JPBS]

SUB CODE: 06 / ⁴⁴¹⁵SUBM DATE: none / ORIG REF: 004

jrn

Card 1/1

GERVERKA, Evzen, inz.; KRAL, Zdenek, zastupujici docent, inz.

Delignification of beechwood flour by nitric acid.

Papir a celuloza 18 no.9:181-184 S '63.

1. Katedra chemické technologie dřeva, Vysoká škola chemicko-
technologická, Pardubice.

FARA, Miroslav; ~~KRAL, Zdenek~~

Unusual localization of desmoid of traumatic etiology. Cas.lek.
cesk.99 no.30-31:968-971 22 J1 '60.

1. Klinika plasticke chirurgie, prednosta akademik F. Burian, a
katedra patologicke anatomie, prednosta doc.dr. J.Stolz, hygienicke
fakulty University Karlovy v Praze.
(FIBROMA case reports)
(MUSCLES neopl)

MALINSKY, L.; MALINSKA, K.; KRÁL, Z.

The relation of cystic mastopathy to carcinoma of the breast.
Acta univ. carol. [med.] 7 no.5:647-653 '61.

1. Chirurgická klinika lékařské fakulty Hygienické University Karlovy
v Praze, přednosta prof. MUDr. Em. Polák Ústav patologické anatomie
lékařské fakulty Hygienické University Karlovy v Praze, přednosta
doc. MUDr. J. Stolz.

(BREAST NEOPLASMS etiol) (MASTITIS compl)

JONAS, Vratislav; PECKA, Vladimir; KRAL, Zdenek

Clinical diagnosis of primary malignant tumor of the heart. Cas. lek. cesk. 101 no.29/30:927-934 20 J1 '62.

1. I klinika nemoci vnitřních lékařské fakulty hygienické KU v Praze, přednosta prof. dr. V. Jonas. Patologickoanatomický ústav lékařské fakulty hygienické KU v Praze, přednosta doc. dr. J. Stolz.

(HEART neoplasms) (SARCOMA diagn)
(RHABDOMYOSARCOMA diagn)

VOJTISEK, V.; PIHRT, J.; KRÁL, Z.

Epistaxis as the principal symptom of a benign adenoma of the adrenal gland. Cas. lek. česk. 101 no.37:1120-1124 14 S '62.

1. Chirurgická klinika lékařské fakulty hygienické KU v Praze 10, přednosta prof. dr. E. Polak. Otolaryngologická klinika lékařské fakulty hygienické KU v Praze 10, přednosta prof. dr. V. Hlavacek. Patologickoanatomický ústav lékařské fakulty hygienické KU v Praze 10, přednosta doc. dr. J. Stolz.

(EPISTAXIS)

(ADENOMA)

(ADRENAL GLAND NEOPLASMS)

HAJEK, S.; GREGORA, Z.; STEFAN, J.; KRAL, Z.; CHYBA, J.; RUZICKA, L.;
DOBRKOVSKY, M.; DOLEZALOVA, J.

Analysis of 147 fatal thermic injuries. Acta chir. plast. 5
no.3:193-204 '63.

1. Medical Faculty of Hygiene, Charles University, Prague
(Czechoslovakia) Department of Pathology and Forensic Medicine
Director: Doc. J. Stolz, M.D. Department of Health Organization,
Medical Faculty of Hygiene, Prague Director: Prof. F. Blaha,
M.D. The Burns Unit of the Clinic of Plastic Surgery, Charles
University, Prague Director: Academician F. Burian.
(BURNS) (MORTALITY) (PATHOLOGY)
(ACCIDENT PREVENTION)

KRALEV, K.

"How I Work in my Forest Preservation Station." p.234
(GORSKO STOPANSTVO Vol. 9, no. 5, May 1953 Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 9,
Oct. 1953, Uncl.

KRALICEK, J.

Distr: 4E2c(1)
 Alkaline polymerization of caprolactam IV. Equilibrium
 and degradation with alkaline polymers of caprolactam
 Jar. Kralicek and I. Bobenda (Inst. Chem. Technol.
 Prague). J. Polymer Sci. 30, 493-9 (1958); cf. C.A. 52,
 12529f. — Intrinsic viscosity of the polymer decreases for the
 first 50 hrs. at 320-330° but remains const. after that. The
 equil. value of the intrinsic viscosity depends on concn. of
 the catalyst and on temp. M. H. Dancig

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 1

J. J.

CZECHOSLOVAKIA / High Molecular Chemistry.

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

Author : Wichterle, O.; Kralicek, J.; Sebenda, J.

Inst : Not given

Title : Anionic Polymerization of Caprolactam 6. III. New Catalysts for Anionic Polymerization of Caprolactam 6

Orig Pub : Chem. listy, 1958, 52, No 4, 636-639

Abstract : The alkaline-catalytic polymerization of caprolactam 6 (I) is caused by any compound which may convert I into an anion of the -CO-N-type. These compounds may be divided into three groups: 1) acid salts, which can be easily decarboxylated with the formation of C-, O-, or N-anions; 2) salts of the light volatile acids; 3) acid salts that decompose in any other way than by the decarboxylation into strong alkaline compounds. A

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I- /

CZECHOSLOVAKIA / High Molecular Chemistry

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

catalyst must dissolve in the molten I. The catalyst activity of compound of the first group does not depend upon alkalinity of the anion, formed in the decarboxylation process, but depends only on the rate of decarboxylation. For catalysts of the $R-CH_2-COOK$ type it increases in the order of $(-C_6H_5)_2COOR-CN$. Certain acids, the salts of which are easily decarboxylated, are not effective as catalysts. To these belong acid salts containing halogens, S, or the NO_2 group (potassium ethylxantogenate, sodium dimethyldithiocarbamate, potassium nitroacetate, potassium trichloroacetate). Anions derived from such acids enter side reactions. Catalyst activities of acid salts were determined from the yield of polymers obtained when 1 mol of I and 0.005 mols of catalyst were heated up to a certain temperature level for a given length of time.

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CZECHOSLOVAKIA / High Molecular Chemistry

I

Abstr Jour : Ref Zhur - Khimiya, No 5, 1959, No. 13045

The following data were obtained (yield of polycaprolactam in %, reaction time in minutes, temperature): cinnamic acid - 89.5%, 120, 250°; sodium phenylacetate - 88.7, 5, 260° or 91.9, 250°; potassium carbetoxyacetate - 88.7, 5, 260° or 91.9, 250°; sodium malonate - 78.2, 45, 260°; potassium monomethyloxylate - 85.0, 5, 250°; potassium phenylcarbaminate - 86.0, 10, 250°; sodium salt of N-carboxycaprolactam - 89.5, 5, 250°; Na-salt of monoethylcarbonic acid - 84.9, 300, 163° or 67.0, 10, 220° or 91.3, 60, 220°; Na-salt monobutylcarbonic acid - 88.5, 5, 260°; KCN - 59.8, 50, 260°; KCNO - 74.5, 5, 250°; NaN₃ - 68.9, 150, 250°. All the above salts are soluble up to a concentration

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I-2

CZECHOSLOVAKIA / High Molecular Chemistry.

I

Abs Jour : Ref Zhur - Khimiya No 5, 1959, No. 18045
Cont'd

of approx. 1% in the molten I at 80 - 100°. Insoluble are: Na-salt of monomethylcarbonic acid and Na-salt of malonic acid. The solubility of salts of acid esters of the carbonic acid increases with the increase of alkyl chain. Parts I and II were covered by the Ref Zhur - Khimiya, 1956, 54678, 65167. -- J. Flesek

Card 1/1

KRALICEK, J.; SEBENDA, J.

Alkaline polymerization of 6-caprolactam. Pt.13. Chem prum 13
no.10:545-549 O '63.

1. Katedra organicke chemie, Vysoka skola chemickotechnologicka a
Ustav makromolekularni chemie, Ceskoslovenska akademie ved, Praha.

23570

Z/009/61/000/007/004/004
E112/E135

15.8107

AUTHORS: Králíček, Jaroslav; Šebenda, Jan; Zadák, Zdeněk; and
Wichterle, Oto

TITLE: Alkaline polymerisation of ϵ -caprolactam. V.
Alkaline polymerisation of ϵ -caprolactam for the
production of large molded objects from high-molecular
poly-6-capramides

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 377-381

TEXT: Caprolactam polymerises in presence of the usual
proton-donating catalysts at temperatures above the melting point
of the polymer. Internal stresses may therefore develop in
extrusion molded objects, and very careful annealing is needed to
produce faultless material. The present paper is a further
contribution to the study of base-catalysed polymerisation of
 ϵ -caprolactam, described in parts in previous issues of this
journal. Very interesting catalysts were discovered in
N-acetylcaprolactam and N,N'-tetraacetylhexamethylenediamine.
Addition of the catalysts to a solution of the sodium salt of
 ϵ -caprolactam (using ϵ -caprolactam as solvent) increases the

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Alkaline polymerisation of ϵ -

Z/009/61/000/007/004/004
E112/E135

polymerisation rate to such an extent that it proceeds already at temperatures well below the melting point of the polyamide. Polymerisation can therefore lead to a polymer in the solid state, and difficulties arising out of changes of density during crystallisation (internal stresses) can be mitigated, if not entirely eliminated. During polymerisation of ϵ -caprolactam, 28 cal/g are liberated, corresponding to a temperature increase of 50 °C in an adiabatically conducted process. Thus, in order not to exceed the melting point of the resulting polyamide, polymerisation should be initiated below 160 °C, as otherwise a polymer melt would be produced. The process presently described leads directly to a solid polymer, practically free of internal stress. Optimum reaction conditions for the production of large, molded objects from high-molecular-weight polycapramide are investigated, particularly the effects of: 1) concentration of N-acetylcaprolactam; 2) concentration of sodium salt of ϵ -caprolactam; 3) initial temperature; and 4) purity of ϵ -caprolactam. An investigation of homogeneity of the finished material in relation to conversion rate and degree of polymerisation was also undertaken. Three different samples of caprolactam were compared:

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E112/E135

Alkaline polymerisation of ϵ -

1) a commercial product of Czechoslovak origin, purified and freed of moisture by distilling off in vacuo 10% of the original charge (the distillation residue was found of sufficient purity for further experiments); 2) caprolactam crystallised from water; 3) caprolactam crystallised from benzene. N-acetyl- ϵ -caprolactam was prepared according to the method of R.E. Benson and T.L. Cairns (J. Am. Chem. Soc., 70, 2115 (1948). Sodium salt of caprolactam was obtained by adding, in an inert atmosphere and protected from moisture, a solution of sodium methylate in anhydrous methyl alcohol to ϵ -caprolactam. Polymerisation experiments were undertaken with solutions of the sodium salt of caprolactam in distilled caprolactam. Experimental details are as follows. Caprolactam, heated to the reaction temperature, was transferred together with the solution of its sodium salt to the polymerisation vessel (stainless steel). The charge amounted to 1.1 kg caprolactam. After stabilisation of temperature the calculated amounts of N-acetyl- ϵ -caprolactam were added under efficient stirring, the operation being carried out in an atmosphere of nitrogen. Heating by means of a thermomantle, which was

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E112/E135Alkaline polymerisation of ϵ -

switched off as soon as the temperature of the reaction mixture rose by 50 °C. Results: best products were obtained with caprolactam crystallised from water, but properties of polymer from technical caprolactam were of sufficient standard to warrant exclusive use in further trials. The effect of the initial polymerisation temperature on polymerisation rate was studied and results are summarised by graphs. Equilibrium is reached after 10-35 min, and rate of polymerisation increases with increase of temperature. Graphs are given for the polymerisation of caprolactam with 0.3 mole % sodium-caprolactam + 0.3 mole % N-acetylcaprolactam. Rate of reaction was very strongly affected by the concentration of N-acetylcaprolactam. The number of macromolecules formed during polymerisation is inversely proportional to the intrinsic viscosity and increases linearly as the concentration of acetyl-caprolactam increases. Rate of polymerisation is influenced by the concentration of sodium-caprolactam in a similar manner. As demonstrated graphically, the intrinsic viscosity remains practically constant with increased concentration of sodium-caprolactam. The new polymerisation method gave reproducible results. Samples of the polymer withdrawn from the

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Alkaline polymerisation of ϵ -

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E112/E135

centre and peripheral parts of the block showed almost identical degrees of polymerisation and contents of monomer. Removal of the polymer from the mold did not present difficulties (owing to contraction, after cooling, by about 2-3%). Experimental blocks of diameters over 20 cm and weighing 9 kg were prepared, also bearings and cogwheels. The new method is protected by a number of Czechoslovak patents.

There are 8 figures, 3 tables and 12 references: 7 Czech, (including citation of patents) 1 Russian, 1 German, 1 Dutch (patent) and 2 English, which read as follows:

Ref.7: A.B. Meggy, J.Chem.Soc., 796 (1953).

Ref.9: R.E. Benson and T.L. Cairns, J.Am.Chem.Soc., 70, 2115 (1948).

ASSOCIATION: Ústav makromolekulární chemie ČSAV a Vysoká škola chemickotechnologická, Praha
(Institute of Macromolecular Chemistry, Czechoslovak AS, and University of Chemical Technology, Prague)

SUBMITTED: September 1, 1960

Card 5/5

KRALICEK, J.

"Handbook of the chemistry of high molecular compounds" by
I.P. Lossev [Losev, I.P.], O.Ja. Fedotova [Fedotova, O.Ya.].
Reviewed by J. Kralicek. Chem listy 58 no.1:43 Ja'64.

SEBENDA, J.; KRALICEK, J. . .

Alkaline polymerization of 6-caprolactams. Pt. 15. Coll
Cz Chem 29 no.4:1017-1028 Ap '64.

1. Institute of Macromolecular Chemistry, Czechoslovak
Academy of Sciences and Institute of Organic Technology,
Higher School of Chemical Technology, Prague.

KRALICEK, Ladislav [deceased]; FRANZ, Ferdinand; QUADRAT, Otakar st.

Study of reactions between oxides and sulfides of metals used in metallurgy. Sbor chem tech 4 no.2:141-157 '60.

(EEAI 10:9/10)

1. Katedra chemické technologie kovů, Vysoká škola chemicko-technologická, Praha.

(Metals) (Oxides) (Sulfides)

KRALICEK, Q.

KRALICEK, Q. Technical standardization in the Bulgarian People's Republic. p. 26.

Vol. 6, no. 2, Feb. 1957

NORMALISACE

TECHNOLOGY

Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

KRALICEK, Q.; CIR, J; NOVICKY, A.

The Press should contribute even more to further technical development. p. 3

VYNALEZY A NORMALISACE, OCHRANNE ZNAMKY, CHRANENE VZORY. Praha, Czechoslovakia,
Vol. 3, No. 6, June 1959

Monthly List of East European Accessions, (EEAI), LC. Vol. 8, No. 9, September, 1959
Uncl.

KRALICEK, Quido, dr.

Ensuring the postgraduate study of technical standardization at the Institute of Economic Planning of the Higher School of Economics, Bratislava. Normalizace 13 no.2:62 F '65.

1. Office of Standardization and Measurement, Prague.

KRALICH, B.

Yugoslavia (h30)

Agriculture - Plant and Animal Industry

Progressive payment according to the amount of work done. p. 35. GODISEN ZPORNIK,
Vol. 2, 1948/49.

East European Accessions List, Library of Congress, Vol. 1, no. 14, Dec. 1952.
UNCLASSIFIED.

UMANSKIY, Yu.A.; KRALICH, I.M.; SIDORIK, G.A.

Relation of the distribution of labelled antibodies in rat organs to the method of their introduction into the body. Pat. fiziol. i eksp. terap. no.2:65-69 '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy i klinicheskoy onkologii (dir. - akademik AN UkrSSR prof. R.Ye. Kavetskiy), Kiev.

CHERNICHENKO, V.A. (Kiyev, ul. Krasnoarmeyakaya, d.134, kv.132)
KRALICH, N.M. (Kiyev, ul. Karla Litknekhta, 7-2, kv.47)

Stimulating effect of thesane and pentoxyl on the growth of
transplantable tumors. Vop. onk. '9 no.7:41-44 '63
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1. Kafedra rentgenologii (zav. - prof. A.Ye. Rubasheva) Kiyev-
skogo instituta usovershenstvovaniya vrachey (rektor- dotsent
M.N.Umovist).

BOUSEK, Otakar, inz.; KRALICKOVA, Hana

International standardization cooperation in agriculture.
Normalizace 11 no.9:306-308 S '63.

BOUSEK, Otakar, inz. KRALICKOVA, Hana

List of the Czechoslovak and foreign technical standards in
agriculture. Normalizace 11 no.9:Supplement: Zahranicni normy
z oboru zemedelstvi no.9:1-40 '63.

A KRALICKOVA, J.

7

The Dumas method for determining nitrogen modified
by Zimmermann for semimicrodeterminations. J.
Kralickova. *Chemie (Prague)* 4, 8 10 (1948); cf. Z.,
C.A. 38, 10487. Frank, Marsh.

ca KRALICKOVA, J.

7

Determination of halogens according to Stepanow. J. Kralickova, *Chemie (Prague)* 3, 80(1948).- Pour 3 cc. abs. EtOH over 10-20 mg. of the substance in an Erlenmeyer flask attached to a reflux condenser. Introduce 0.4 g. of Na and after 4 min. add 3 cc. abs. EtOH and allow it to stand for 3 min. After adding 6 cc. of halogen-free water, heat for 3 or 4 min. at the b.p., dil. with water, acidify with HNO₃, and det. the Cl⁻ by any standard method, but preferably by weighing the pptd. AgCl. AmOH contg xylene or toluene can be used instead of the abs. EtOH.
Frank Maresh

1952

KRALIK, A.

Increasing the life of ingot molds. p.205

KOHASZATI LAPOK. (Magyar Bányászati és Kohászati Egyesület)
Budapest, Hungary
Vol. 13, no.9, Sept. 1958

Monthly List of East European Accessions (EEAT) I.G., Vol. 8, no.7, July 1959
Uncl.

S/137/62/000/002/018/0:
A006/A101

AUTHORS: Králík, B. Makray, T., Toth, G.

TITLE: Investigating Al distribution in semi-killed steel ingots and plates

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 43, abstract 27261
("Dunai vasmű", 1960, v. 1, no. 1, 22-32, Hungarian)

TEXT: The author describes a technology for melting and teeming 1.4 - 3.0-ton semi-killed steel ingots at the Dunai Metallurgical Combine. Final deoxidation is performed with Al powder (0.18 - 0.24 kg/t) through a funnel prior to completing the filling of the mold. The authors studied the distribution of deoxidation products in ingots and plates (8 - 25 mm) by the method of radioactive isotopes (with the use of Al tagged with Zn^{65}). They investigated also topography of plate defects by ultrasonic control to reveal the causes of rejects due to surface (15.16%) and internal (13.19%) defects. The non-uniform distribution of Al_2O_3 impurities revealed over the cross section of ingots and sheets was about 26% (increasing percentage towards the center) and over the height was ~71% (displacement towards the top of the ingots and plates). Rejects during the rolling of plates increase on account of a stronger segregation

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Investigating Al distribution ...

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A006/A101

of Al_2O_3 impurities which is accompanied by the formation of cavities, unable to be welded-up, at the ingot top in the case of excessive final deoxidation, and by the formation of internal blisters in the case of weak final deoxidation. The formation of cavities which are unable to be welded-up, is explained by the joint effect of emanating gases and shrinkage. To improve the quality of ingots, it is recommended to use risers and to add the metal after final deoxidation through a funnel during the teeming into molds.

Yu. Minayev

[Abstracter's note: Complete translation]

Card 2/2

NAGY, Angela; KRALIK, Bela (Pestszentlorinc)

A two-hundred-fold worker-innovator about the innovator movement.
Ujit lap 13 no.23:14 D '61.

1. Csoportvezeto lakatos, a Lorinci Hangermu ketszazszoros ujitoja.

KAPTAY, Gyorgy; KRALIK, Bela

Factory news. Koh lap 93 no.11:504 N '60.

ALEXITS, G. [Alexits, Gyorgy]; KRALIK, D.

On the absolute summability and the convergence of orthogonal series. Mat kut kozl MTA 7 series A no.3:363-371 '62.

1. Technische Hochschule, Budapest. (for Kralik).

KRATIK, D. 55

Mathematical Reviews
May 1954
Topology

Kratik, D. 55. Concerning a remark on universal spaces.
Magyar Tud. Akad. Mat. Fiz. Oszt. Közleményei 7, 561-
562 (1953). (Hungarian)
The remark is that the inverse of a homeomorphism from
a separable metric space R into the Hilbert cube is uniformly
continuous only if R is totally bounded. P. R. Halmos.

KR. K. D.

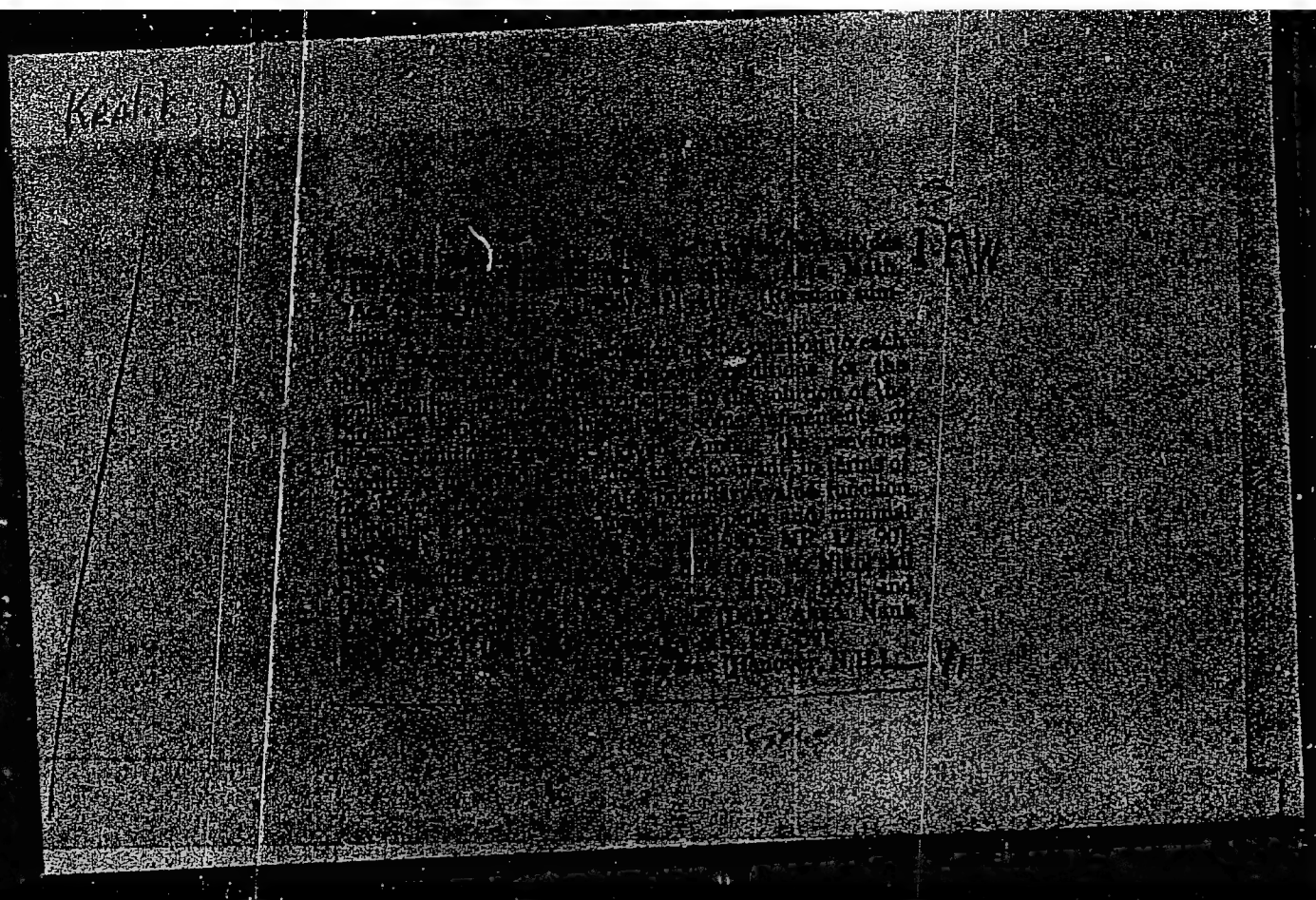
Brück, R. Untersuchung der Integrale und Derivierten
von Funktionen. Ordnung mit den Methoden der konstruk-
tiven Funktionentheorie. Acta Math. Acad. Sci.
Hungar. 7 (1956), 47-64. (Russian summary)

The author investigates the degree of approximation of
fractional integrals and derivatives by $(C, 1)$ partial sums
of their Fourier series and obtains as corollaries some
theorems of Hardy and Littlewood about the Lipschitz
classes Λ_{α}^p where α is a fractional integral and derivatives
belong. [Math. Z. 47 (1928), 563-606; Zygmund, Trigo-
nometrical series, Warszawa-Lwow, 1935, chap. 9]. The
author's method due to Alencu (same Acta 3 (1952),
29-42; MR 14, 370) depends on some lemmas on series in
a Banach space; a typical one is as follows. Let $\{a_n\}$ be a
sequence of elements of a Banach space, σ_n the arithmetic
means of the partial sums of $\sum a_n$ and $\sigma_n(a)$ the arith-
metic means of the partial sums of $\sum a_n a_n$ where
 $0 < \alpha < 1$. Then if there is an element S such that $\|a_n - S\| =$
 $O(n^{-\alpha})$, there is an element $S(a)$ such that $\|\sigma_n(a) - S(a)\| =$
 $O(n^{-\alpha})$ provided that $0 < \beta < 1$ and $\alpha + \beta < 1$. Now let f
be a periodic function in L^p , its conjugate f_* its ath (Weyl)
integral and $f^{(\alpha)}$ its ath derivative ($0 < \alpha < 1$). Let $\sum A_n(x)$
be the Fourier series of f . By $f^{(\alpha)}$ we denote the L^p

PARALLEL

norm, for $n \in \mathbb{N}$, $f \in L^p$ mean the space of continuous functions (contrary to the usual convention). The following theorems are proved: (1) Let $f(x)$ be the function whose Fourier series is $\sum_{n=1}^{\infty} \frac{f_n(x)}{n^p}$, then $\|f_n(x) - f(x)\|_p = O(n^{-p})$ if and only both in L^p then $\|f_n(x) - f(x)\|_p = O(n^{-p})$. (2) $\|f_n(x) - f(x)\|_p = O(n^{-p})$ at almost every point. (3) If $f \in L^p$ ($1 \leq p < \infty$) then $\|f_n(x) - f(x)\|_p = O(n^{-p})$ and there is an element ψ of L^p such that $\|f_n(x) - \psi(x)\|_p \leq C(n^{-p})$ for all n . It follows as a corollary that $f \in \text{Lip}(\alpha, p)$. (4) If $f \in \text{Lip}(\alpha, p)$ ($0 < \alpha < 1$) with $\|f\|_p < \infty$ and $\|f_n(x) - f(x)\|_p = O(n^{-\alpha})$ then $\|f_n(x) - f(x)\|_p = O(n^{-\alpha})$ and consequently $f \in \text{Lip}(\alpha, p)$. (5) If $f \in \text{Lip}(\alpha, p)$ ($0 < \alpha < 1$, $1 < p < \infty$) and $0 < \beta < \alpha$ then (6) exists and $\|f_n(x) - f(x)\|_p = O(n^{-\beta})$. Hence $f \in \text{Lip}(\beta, p)$. (6) Let $\text{Lip}(\alpha, 0, p)$ be the intersection of all $\text{Lip}(\alpha, p)$ ($\alpha > 0$) then $f \in \text{Lip}(\alpha, 0, p)$ ($0 < \alpha < 1$) if and only if for every $\epsilon > 0$ corresponds $\beta \in L^p$ such that $\|f_n(x) - \beta(x)\|_p \leq C(n^{-\beta})$ and $\|f_n(x) - f(x)\|_p \leq C(n^{-\beta})$. (7) Let s_n be the ordinary partial sums of the Fourier series of f . Then $f \in \text{Lip}(\alpha, 0, p)$ if and only if $\|s_n - f\|_p = O(n^{-\alpha})$ for every positive α . Boas, Jr. (Evanston, Ill.)

Boas
2/2



ALEXITS, Georg [Alexits, Gyorgy]; KRALIK, D.

Degree of approximation in case of strong summation of continuous functions. Mat kut kozl MTA 8 series A no. 3:317-327 '63('64).

1. Technische Hochschule, Budapest.

KRALIK, F., dr.; DUHAJ, P., inz.; HAVALDA, A., inz., C.Sc.;
SCHWEIGHOFFER, A., inz.; OPRAVIL, O., inz.

The structural stability of resistance of butt welded 16/13
Nb austenitic steel. Zvar sbor. 11 no.1:80-104 '62.

1. Slovenska akademia vied, Bratislava, Vyskumny ustav zvaracsky,
Bratislava.

6

ca

PROCESSES AND PROPERTIES

Spectral analysis. Ferdinand Králík. Chem. Zvesti 1.
2:10-3(1947). A review. Jan Miska

ASH 514 METALLURGICAL LITERATURE CLASSIFICATION

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDERS

PROCESSES AND PROCEDURES

7

CA

The spectral analysis of brasses by Meisl's intermittent arc, Ferdinand Kralik, Chem. Zvesti 1, 277-94(1947).—Meisl's intermittent arc and Zeiss Q 24 app. give good results in the detn. of Al, Sn, Pb, and Mn. The sparking by the Fuess app. is not satisfactory for detg. traces of Al and Fe. The sparking curves can be explained by the theory of Mader (Zetschrift 4, 40, 7044) and by the dependence on the ionization potentials. The intensity of spectral lines is influenced by the ionization potentials of the alloyed elements and m.p. of the alloys. There is a mutual influence of Cu and Zn on the detn. and calibration of Al and Sn. — J. Miska

ASS. S.E.A. METALLURGICAL LITERATURE CLASSIFICATION

62

13-F. Casting of Nonferrous Metal Ingots. (In Czech.) P. Kralik, *Hutnické Listy*, v. 5, June 1950 (Supplement), p. 98-102.

Current casting methods, especially those used for casting Al and Cu. Detailed analysis of ingot defects. (E general, Al, Cu)

ASB-54 A METALLURGICAL LITERATURE CLASSIFICATION

13-F. Casting of Nonferrous Metal Ingots. (In Czech.) P. Kralik, *Hutnické Listy*, v. 5, June 1950 (Supplement), p. 98-102.

Current casting methods, especially those used for casting Al and Cu. Detailed analysis of ingot defects. (E general, Al, Cu)

1035 Casting of Nonferrous Metal Ingots. (In Czech.) F. Králík. *Hutnické Listy*, v. 5, June 1950 (Supplement), p. 102-107. Summarizes current casting methods, especially those used for casting Al and Cu, and gives a detailed analysis of ingot defects.

1035 Casting of Nonferrous Metal Ingots. (In Czech.) F. Králík. *Hutnické Listy*, v. 5, June 1950 (Supplement), p. 102-107. Summarizes current casting methods, especially those used for casting Al and Cu, and gives a detailed analysis of ingot defects.

17

B

Amalgamation of Aluminum and Its Alloys in the Presence of Water. (In Czech.) Ferdinand Kralik. *Hutnické Listy*, v. 5, Aug. 1950, p. 326-329.

Discusses influence of the liquid Hg phase on spontaneous disintegration of amalgamated Al. This effect is said to be specially important in Al-Zn-Mg and Al-Zn alloys. Shows how the effect can be used to determine the susceptibility of the alloys to intercrystalline corrosion, and for detection of harmful internal stresses.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

C. A.

7

Plastic deformation of electrolytically polished brass surfaces. Vest. Kralik and Leo Zalus. *Hutnick. Listy* 5, 412 (1930). The authors have investigated the possibility of utilizing electrolytically polished surfaces for examining the plastic deformation of brass specimens. Specimens of the α - and the $\alpha + \beta$ -type were electrolytically polished in 85% H_2PO_4 diluted by $MeOH$ to a sp. gr. of 1.1. A voltage of 5 to 8 v. and a c.d. of 20 to 30 amp. sq. dm. were used. The polishing time was 1 to 10 min. according to the state of the surface after preliminary treatment and according to the composition of the specimens. The size of the specimens was 10 x 7 x 80 mm. and one surface of the area 10 x 80 mm. was electrolytically polished. The plastic deformation was obtained by applying tensile stress to the specimens in a tensile strength testing machine. Photomicrographs were taken for various stresses and degrees of deformation. These show that the progress of plastic deformation and its influence on the changes of the grain structure can conveniently be studied from the changing appearance of a surface which has been electrolytically polished before the plastic deformation started. The formation of sliding planes and the displacement of crystallites can be conveniently observed. This method will be useful for investigating creep phenomena in tests of long duration and also for studying the formation of cracks and stress concentration. Unlike a mechanically polished surface, electrolytically polished surfaces do not show any effect of deformation of heating due to the contact of this surface with the polishing tool and thus represent an ideal cross section through the material. E. Gross

MR 9

630-Q. Copper Alloys With Improved
Mechanical Properties and Electrical
Conductivity. (In Czech.) Ferd. Kin-
lik, *Hutnické Listy*, v. 7, Feb. 1952,
p. 71-72.
Properties of various Cu-Cd, Cu-
Ag-Cd, Cu-Cr, Cu-Ni-Si, Cu-Be, and
Cu-Ag alloys. (Q general, P18, Cu)

AUTHOR: Králík, Ferdinand, Engineer Doctor CZECH/34-59-9-3/22

TITLE: Plasticity of Metals and of Some Inorganic Substances
as a Function of the Latent Fusion Heat, Latent
Evaporation Heat and Sublimation Heat

PERIODICAL: Hutnické listy, 1959, Nr 9, pp 758-761

ABSTRACT: Y. A. Klyachko (Ref 1) proposed using as an index of plasticity of metals the difference between the fusion and the boiling points. This relation is entered for a number of substances in the graph, Fig 1. According to Y. S. Yumanskiy (Ref 2) there is an inter-relation between the maximum possible hardness of Mg, Al, Cu, Ni, Fe and their sublimation heat; R. Fricke (Ref 3) also states that there is a relation between the hardness and the sublimation heat. Calculated values, entered in Table 1, of the ratio of the sublimation heat to the fusion heat versus the fusion temperature, graphed in Fig 2, indicate that there is an unequivocal relation between the plasticities of metals and of certain inorganic substances and the respective sublimation heat to fusion heat temperature ratios. The calculations are based on the

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KRALIK, F.

Distr: 4E2c(m)

Reaction of ruthenium(III) and ruthenium(IV) chlorides with sodium azide. V. V. Vlasov, F. Kralik and J. Souček (Vojenská akad. A. Zápotočský, Brno, Czech.). Chem. Zvesti. 25, 2155-60 (1960) (in German).—Ru(III) and Ru(IV) salts react in HCl solns. with azide to form characteristically colored complex compds. Ru(IV) chloride forms unstable red solns. with NaN_3 ; this reaction is followed by the redn. of Ru to the trivalent form. The Ru(III) salts form a complex with NaN_3 with a ratio $\text{Ru}:\text{N}_3^- = 2$ and a sharp absorption max. at 290 m μ . E. Erdős

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mdc(jd)

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D007/D102

1.2300
AUTHORS: Králik, F., Doctor; Duhaj, P., Engineer; Havalda, A., Engineer,
Candidate of Sciences; Schweighofer, A., Engineer; and Opravil O.,
Engineer

TITLE: The problem of structural stability of 16/13 Nb austenitic steel
in resistance flash butt welding

PERIODICAL: Zváračský sborník, no. 1, 1962, 80-104

TEXT: Some mechanical properties and structural changes in the heat-
affected zone of Type 16-13Nb steel at resistance flash butt welding were studied
to resolve controversial interpretations regarding the causes of cracking in the
weld area of this steel type. A thermal-cycle simulator with programable heat-
treatment of test specimens was built for this purpose at the Laboratorium fyziky
kovov SAV (Laboratory of Metal Physics, Slovak AS). In the test program, three
thermal cycles were simulated with the following respective maximum temperatures:
 $T_{min}=900^{\circ}C$; $T_{inter}=1100^{\circ}C$; and $T_{max}=1300^{\circ}C$. The influence of these cycles on the

Card 1/2

The problem of structural ...

Z/046/62/000/001/004/007
D007/D102

structural stability of the investigated steel was determined by: Optical and electron microscopy; X-ray and electron diffraction; microchemical analysis and spot X-ray spectral analysis; and magnetometric analysis. From the results obtained, it is concluded that the final mechanical properties of the steel are greatly influenced not only by the sigma phase, but also by the morphology and distribution of niobium carbide. However, the cause of the cohesion loss along the grain boundaries cannot be explained merely by the observed phase transformations, as proposed by Moore and Griffith [Journal Iron Steel Inst. 197, 1961, 1, 29-39], but is rather attributable to the combined effects of various factors, such as liquid film along the grain boundaries; internal stresses; formation of microcracks upon cooling; hot and cold brittleness; formation of a new phase; local formation of niobium eutecticum; etc., as suggested by Heuschkel [Welding Journal 35, 1956, 12, 569-581]. There are 34 figures and 3 tables. ✓

ASSOCIATIONS: SAV Bratislava; VUZ Bratislava

Card 2/2

G/014/62/000/004/003/006
D030/D109

AUTHORS: Králik, F., Doctor, Duhaj, P., Engineer, Havalda, A., Engineer,
Schweighofer, A., Engineer, and Opravil, O., Engineer (Bratislava)

TITLE: The stability problem of the structure of 16/13/Nb-chrome-nickel
steel butt-welded according to the gas-welding method

PERIODICAL: Schweisstechnik, no. 4, 1962, 185-186

TEXT: The increased application of austenitic steels in the chemical industry and in thermal power plants continuously demands higher specifications for reliable weldability, permanent heat resistance and corrosion resistance. Studies of the phase conversions in the heat-affected zone of an austenitic steel during the welding process or heat treatment are of great importance. Comprehensive tests, particularly on the basis of thermal cycles, showed that cracks are caused by the combined effect of a number of factors, e.g.: liquid film around the grain boundaries, inner stress, formation of micro-cracks during cooling, hot- and cold-shortness, generation of a new phase in the local formation of a eutectic, etc. The σ -phase and form and distribution of niobium carbides also have a considerable influence on the resulting properties.

Card 1/1

KRALIK, F.; VRESTAL, J.

Complex compounds of ruthenium with quinquivalent heterocyclic compounds. Part 3: Reaction of ruthenium(II)-ions with pyrazole, 3,5-dimethylpyrazole imidazole and benzimidazole. Coll Cz Chem 27 no.7:1651-1657 JI '62.

1. Militarakademie A. Zapotocky, Brno.

SCHNEIDER, A.; BRALIK, F.

Experiments on the aging of thin metal sheets. Czechoslovakia
noted: 1966-1967. P. 165.

1. Laboratory of Metal Physics of the Slovak Academy of
Science, Bratislava.

KRALIK, FRANTISEK

CZECHOSLOVAKIA

KRALIK, Frantisek

CSSE

Prague, Casopis pro mineralogii a geologii, No 1, 1963, pp 65-87

"Preliminary Report on New Discoveries of Aragonite in Czechoslovak Caverns"

SEBO, Pavel; KRALIK, Frantisek

Orientation relation of vanadium carbide to ferrite. Cs cas
fys 13 no.3:181-188 '63.

1. Laboratorium fyziky kovov, Ceskoslovenska akademie ved,
Bratislava,

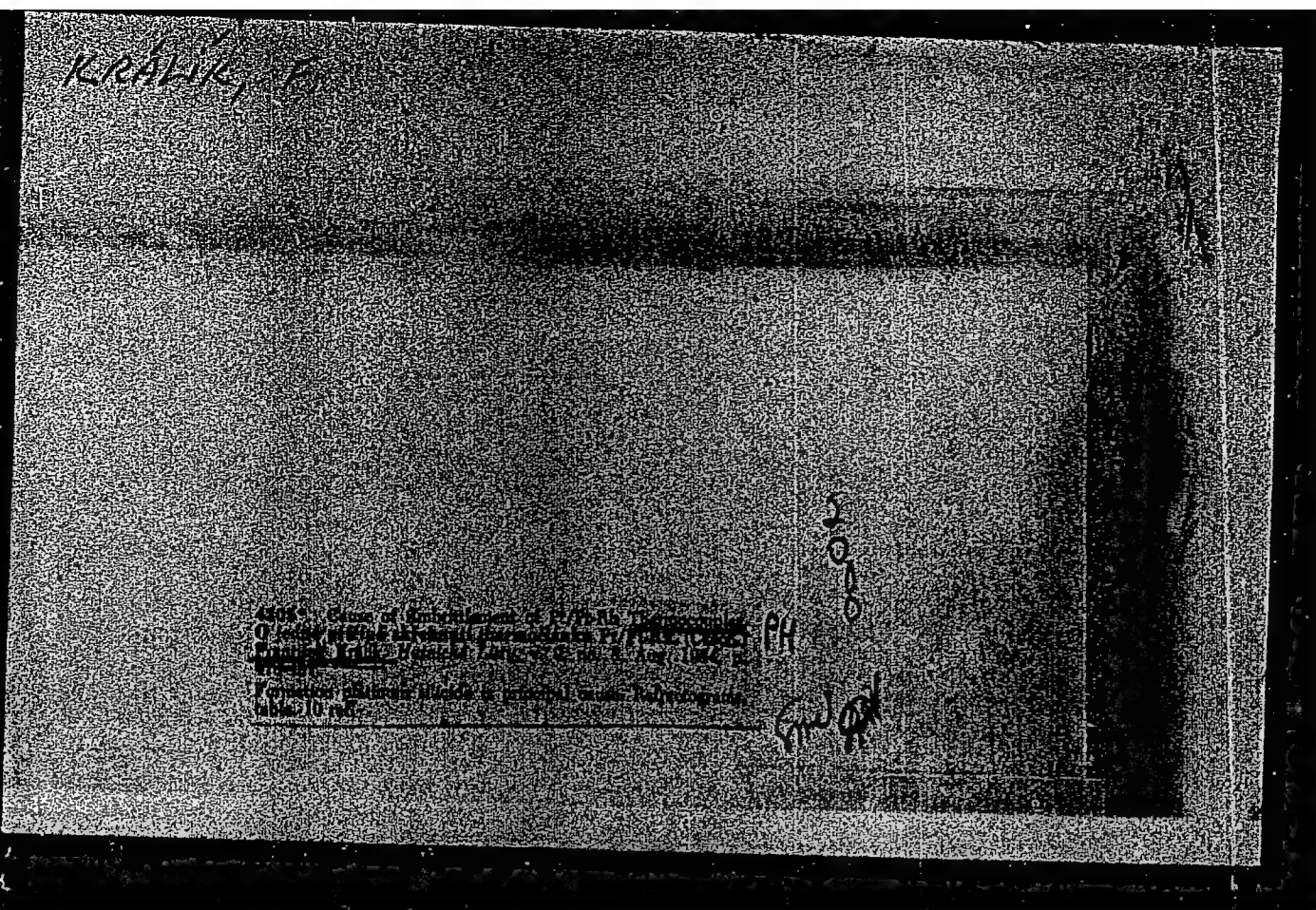
KRALIK, FRANTISEK

B. T. R.
June 1954

Metals-Metallography, Transformations,
and Structures

8612* Examining Structural Changes in Connection With
Secondary Hardening of Low Alloy Roller Steel by Elec-
tronographic Method. (Czech.) Frantisek Kralik. Hutnické
Listy, v. 9, no. 2, Feb. 1954, p. 77-83.
Precipitation of alloy carbides at temperatures between 450 and
700 C considered primary cause for secondary hardening.
Tables, micrographs, photographs, graph. 4 ref.

B-194/54



~~FRANTIŠEK~~, KRÁLÍK, František

CZECH

12101* Electron Diffraction Method and Its Use in Metallography; Especially in the Metallography of Steel. Elektronová difrakce a její použití v metalografii, speciálně v metalografii oceli. (Czech.) František Králík. Hutnická Listy, v. 10, no. 5, May 1955, p. 286-288.
Method used to study the structure of fracture surfaces and structural changes during secondary steel hardening. Micrographs. 10 ref.

Kralik, Frantisek

Mex Mechanism of vanadium carbide precipitation. ~~Prant~~
~~et Kralik (1961), Studium Vlastnosti Kova, CSAV, 1961,~~
~~Prant, Vlastnik Listy II, 200-21 (1961).~~ In the initial
 martensitic structure the dispersion hardening together with
 the formation of the phase V_4C_3 takes place directly in the
 oversatd. solid; during the reppn. within bainitic structures
 a progressive soln. of cementite occurs and the V carbide is
 formed from ferrite. The time necessary for the formation
 of V carbide during reppn. is about 10 times that during
 pptn. *Pm*

KRALIK, F.

Effect of the small content of lead on the hot rolling of Al-Cu-Mg1 alloys.

P. 49. (HUTNICKE LISTY.) (Brno, Czechoslovakia) Vol. 13, No. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

KRALIK, Frantisek

Preliminary report on the new discovery of the aragonite
in the Czechoslovak caverns. Cas mineral geol 8 no.1:85-87
Ja '63.

ACCESSION NR: AP4017926

Z/0065/64/000/001/0013/0027

AUTHOR: Vyklicky, Miloslav (Vy*klitskiy, Miloslav); Kralik, Frantisek (Kralik, Frantishek); Tuma, Hanus (Tuma, Ganush)

TITLE: Distribution of the elements between the alpha and gamma phases in chromium-nickel steels with two-phase structure

SOURCE: Kovove materialy, no. 1, 1964, 13-27

TOPIC TAGS: element distribution, alpha phase, gamma phase, chromium-nickel steel, two-phase structure, manganese

ABSTRACT: The paper studies with a KAMEKA micro-probe the distribution of manganese chromium and nickel in ferrite and austenite in two-phase chromium-nickel steels with a content of about 0.1% C, 21% Cr, 0.5--9.8% Mn, 3.1--6.6% Ni, some of which were further alloyed with about 2% Mo and 0.3% Ti. It was found that the distribution factor in the range of chemical composition studied is approximately constant; about 1.2 for chromium, and 0.9 for manganese. For nickel, this factor depends upon its content in the alloy and varies from 0.55 to 0.65 in the range studied. The heat of solution was found to be about +500 cal/mol for chromium, about -300

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for manganese and from -1,000 to -1,500 for nickel, depending on the nickel content. The data determined for chromium and nickel agreed well with those cited in the literature. The value of -2,040 cal/mol given for manganese in the literature is based on balanced binary Fe-Mn diagrams, where the breakdown of the manganese into alpha and gamma phases is determined indirectly (dilatometrically, metallographically, etc.), and conflicts with all practical experience thus far gained. The paper also shows that in the alloys studied the heat of solution depends on the temperature, which contradicts Zener (Transactions of the Am. Inst. of Mining and Metall. Engineers, 167, 1946) and Jones and Pumphrey (J. Iron and Steel Inst., 163, 1949), who derived the equation for the heat of solution under the assumption that its distribution does not depend either on the temperature or on the concentration of the alloy elements. The authors could not decide from their experiments whether this disagreement was due to the higher concentration of the alloy elements in the specimens or whether that assumption was unjustified. Original has 6 tables, 8 graphs, and 2 equations.

ASSOCIATION: Statni vyzkumny ustav materialu a technologie, Prague (State Experimental Establishment for Material and Technology); Laboratorium fyziky kovov SAV, Bratislava (Laboratory for the Physics of Metals of the SAV)

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L 18820-65 EMT(m)/EPR/EMA(d)/T/EMF(t)/EMP(k)/EMP(b) Pr-4/Pa-4 AB(mp)-2/
 IJP(c)/ASD(a)-5 JD/EM
 ACCESSION NR: AP5000102 2/0065/64/000/006/0558/0568

AUTHOR: Taborsky, L. (Taborskiy, L.); Kralik, P.; Sabo, P. (Shabo, P.)

TITLE: Study of surface phenomena in aluminum single crystals
plastically deformed at high strain rates

SOURCE: Kovove materialy, no. 6, 1964, 558-568

TOPIC TAGS: aluminum single crystal, slip band density, strain rate

ABSTRACT: The dependence of the elongation and the density and width of slip bands on the strain rate ($100-5000 \text{ sec}^{-1}$) was determined during explosive loading of aluminum single crystals having orientations of $\langle 100 \rangle$, $\langle 112 \rangle$, and $\langle 111 \rangle$. The density of the slip bands reaches a maximum of 17,000 bands/cm at a strain rate of about 1000 sec^{-1} . The decrease in elongation with increasing strain rate is least marked in single crystals $\langle 112 \rangle$. The slip system (111) is always active. For $\langle 112 \rangle$ and $\langle 111 \rangle$ orientations only, the uncharacteristic slip system (100) $\langle 110 \rangle$ was also observed in the area of high strain rates. With increasing strain rate, the plastic-deformation distribution in the single crystals is more uniform, re-

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ACCESSION NR: AP5000102

ardless of the orientation. Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: CSAV, Laboratorium fyziky kovov SAV, Bratislava (CSAV, Laboratory of the Physics of Metals, SAV)

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OTHER: 009

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